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**FCC MAIL ROOM** Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
 )  
1998 Biennial Review - Amendment of ) WT Docket No. 98-143  
Part 97 of the Commission's Amateur )  
Service rules. )

To: Federal Communications Commission

**COMMENTS OF**

**Raymond K Adams**

**INTRODUCTION**

I have been licensed and active in the Amateur Service well over twenty years, presently holding an Extra class license with the vanity call sign W4CPA. That call sign was selected prior to my May 1998 retirement from some thirty nine years practice as an independent Certified Public Accountant in Knoxville, Tennessee.

I helped originate the Volunteer Examiner (VE) program as the contact VE of The Knoxville team of VEs appointed by the Western Carolina Amateur Radio Society, VEC/Inc. (WCARS/VEC) This is one of the more active VE teams in the nation, normally examining some 400 plus applicants at about two dozen sessions annually.

I serve the above mentioned VEC as Vice President, Treasurer, and prime FCC Contact Person, with the later being tantamount to Chief Executive Officer.

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I was elected a member of the initial (QPC) of the National Conference of VECs (NCVEC) at their second annual meeting in the offices of the Commission in Washington DC in 1986 when a report and order was dropped on the table, quite unexpectedly to the VECs in attendance, divesting the Commission's staff of the responsibility for writing the question pools from which the licensing tests of the Amateur Service are taken and charging the VECs with this responsibility. I was further elected chairman of the committee in 1989.

I was elected Treasurer of NCVEC when that body devised a method of generating funds with which to pay the legitimate expenses of conference which had previously been absorbed by the VEC the NCVEC officer or appointee represented.

As I remain in all positions described above, this is probably the only comments the Commission will receive from an individual with sustained first person hands on experience at all levels of the VEC program and is without an agenda other than the best interests of the Amateur Service.

## DISCUSSION

At the inception of radio, Amateur Service or otherwise, telegraphy was the only available mode, thus proficiency was a must for operation and its inclusion in the necessary license testing was mandatory. As technology developed other modes, many licensed amateurs, and indeed entire services used the other modes. Let's face it, CW is an element of nostalgia. Realization of this fact relegates the requirement of CW testing to treaty compliance.

I Think the handling of the Novice and Technician classes of licenses should be to:

1. Issue no further licenses of these classes,<sup>1</sup> allowing those who presently hold those classes of licenses to continue to enjoy their present privileges [including renewal] until and unless they pass the required written elements to upgrade to General Class.
2. Require either the Novice or Technician Class licensee to pass written Element 3 only to upgrade to General Class. I know that is giving the Novice Class licensee a break, but there are but few of them anyway.
3. This would grandfather to General Class those who presently hold Technician Plus Class by way of having passed the 50 question Element 3 Technician/General test that was administered before "Novice Enhancement" implemented in 1978.

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<sup>1</sup> Other than those created by upgrading from existing Novice class licensees. This will NOT add to the database of license classes being phased out.

With this handling, by the time this generation has passed, there will no longer be any Novice or Technician Class licenses outstanding, thus they will have "sunsetted" without taking anything away from any one. The idea of combining the present 35 question Novice test with the present 30 question Technician test for a 65 question Technician test appears to be contrary to the need of the Amateur Radio Service in that it would actually raise the standards for entry at a time when the service is suffering for a population.

Much of the present Novice written test is aimed at HF operations while most of the RF safety questions are in fact duplicated in the present Technician class test - to the point that the same tables detailing RF safety are issued with both elements.

Additionally, Amateur Radio has progressed to a service populated, to a great extent, by those who are without the capability of repairing, let alone building their own equipment. This is but a parallel of reality as it exists today. When I was a teenager, most folk repaired their own automobiles, if they owned one. Today's automobile requires the use of a specialized computer for simple diagnosis of the malfunction. That same condition reflects itself in the Amateur Radio service today, as typical operator can pay a qualified technician on a test bench with the needed test equipment to repair a radio at less cost than would be incurred to rent the needed test equipment if it was both available

for rent and the operator did in fact know how to use it. I therefore believe the technical portions of the tests as used in the VE program today have served their purposes in past generations, but their era of usefulness in amateur license testing has passed. This causes me to question the advisability of continuing the use of present Element 4A in any capacity, as it has evolved into a series of questions, inherited from the FCC and continued by the QPC, that in no way addresses the additional privileges of today's Advanced Class operator's privileges as required by 97.503(b)(4). I also think the QPC could, and would, subject to instruction from the entire NCVEC in session and voting, keep the question pools more in line with current technology than has been accomplished by way of setting out a "mini syllabus" in 97.503(c).

WCARS/VEC implemented a computer program in 1986 which not only selects the questions to be used in a particular design but rearranges the answer and distractors following each question in such a way that a specific perforated grading overlay already on hand will grade the test just printed. By using 15 overlays, each of which turn four ways to arrive at 60 different answer configurations in the system it is felt the system would be difficult to circumvent via memory of answer position. These overlays are very time intensive in creation so that replacement cannot be included in the anticipated usage. The original overlays put in use in 1986 are still quite usable today.

The strength of the system is that the overlays in the possession of our some sixty VE teams need not be changed when a question pool is changed. All that is needed is to run the new tests from the new question pool but configure them to the overlays already in that particular team's possession.

WCARS/VEC has shared this system for use by several other VECs, including the American Radio Relay League (ARRL). The system as used by WCARS/VEC is limited to a maximum of a fifty question test. The ARRL modified it to accommodate a maximum of a sixty question test. Requiring a test of more questions than is provided for in the systems presently in use would require replacement of all overlays nationwide.

To require any written test in excess of 50 questions would be a major transition problem for more than one VEC.

So far as details of the telegraphy examination is concerned, let me make this statement:

A few years ago, the National Conference of VECs [NCVEC] voted at one of its annual meetings not to coordinate any further telegraphy examinations using a "fill in the blank" written test in which the complete text of the telegraphy test with 10 key words left blank is distributed to the applicants for them to complete.

After that meeting, when one of the participating VECs was informed that one of their VE teams was still using that type of test replied: "I didn't vote for that issue" Thus we see in practice that there is really no uniformity of implementation of NCVEC direction. Any details of grading a telegraphy examination that the Commission determines desirable must be spelled out in Part 97 for a uniformity of implementation to happen.<sup>2</sup>

I think the present concept of using either a multiple choice or ten question test supplemented by a passing grade being optionally awarded for one minute of continuous copy without error at the option of the VE team is working quite well.

I have found that the multiple choice test is favorable over the ten question test because it removes more of the VE's judgement in the process of grading. With a test requiring the applicant to supply the answer, what is an acceptable answer? If he gets the brand name of a piece of equipment mentioned in the telegraphy, does he need the model number as well? This type test leads to inconsistent handling among different VEs, all with unquestionable intentions.

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<sup>2</sup> I have not seen this trend in the performance of any NCVEC function, namely the QPC or the Standards Committee (which documents those items of general benefit that are not covered by regulations or FCC instruction) both of which make a good faith effort to follow the instructions of the NCVEC.

The suggestion requiring of one minute of continuous copy as the only criteria of a passing grade for a telegraphy element is obviously born in an atmosphere totally devoid of experience as a Volunteer Examiner. We all remember the Commission's staff at Gettysburg labelling illegibility as their greatest problem while they were doing the data entry for licenses in the Amateur Radio Service.

Now that we VECs are doing the data entry we are only too aware of the realities of the difficulty of reading the handwriting of the population at large. This would be a very slow process at the optimum.

To require the VE to actually read the composition of the applicant to detect the one minute of perfect copy would lead to a tremendous backlog of detail in a large session as well as contributing to a multiple of controversies when the VE interpreted handwriting composed under the pressure of a telegraphy examination different from that which the applicant actually intended (or claimed) for it to be.

I think grading of a telegraphy test should be accomplished by the use of a ten question to answer test or a ten question multiple choice test supplemented by a passing grade being awarded for one minute of perfect copy, if the examiner can detect such on the copy paper of an applicant who did not supply the required number of correct answers on the written test.



The FCC's staff, in years gone by when they were testing, used one minute of perfect copy as the only criteria. This was later abandoned in favor of ten questions to answer, and was even later changed to a ten question multiple choice test.

I also think, to ensure uniform compliance, this needs to be spelled out in Part 97 that the number of correct answers that is considered a passing grade be the same as was used by the Commission's staff when they were administering the tests themselves: ie 7 out of ten for a ten question to answer test and EIGHT out of ten for a multiple choice test. At present, I think all VECs are using 7 out of ten questions as a passing grade for all written telegraphy tests, in many cases out of peer pressure. One VEC can hardly use a higher standard than another is using, else the VEs appointed by the one VEC would be testing an empty room.

It is not a healthy situation that the generally accepted standards of VE testing have settled down to be, in reality, the lowest standard in use by any one VEC, but that is the real time condition that exists today. We should improve on that.

## CONCLUSION AND RECOMMENDATIONS

If CW is recognized as being retained in the testing program only as a matter of treaty compliance, I think we would all agree that it should be a requirement for the General Class license.

Once this is accepted, I can't see the justification for two classes of licenses above General Class. This can easily be handled by not issuing any further Advanced Class licenses and renewing all of them as Extra Class with the privileges of an Extra Class extended to them on the effective date of the R&O.

Delete 97.503(b)(1), (4) and 97.503(c)

At the same time, lets renumber all elements of testing.

Element 1	5 WPM telegraphy (required for General Class)
Element 2	30 question written examination required for Technician Class license.
Element 3	30 question written examination required for General Class license
Element 4	40 question written examination required for Extra Class license

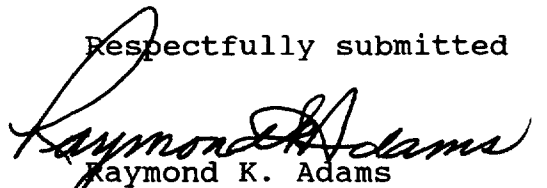
This would have the effect of discontinuing the use of written Elements 2 and 4A as they exist today and would (eventually) get us to an Amateur Radio Service of three classes of licenses.

That would not even cause the QPC to break stride. They could simply announce that the present Element 3A, Technician Class as is now in public domain would be used as Element 2 until the element is rewritten, the present Element 3B as is now in public domain would be used as Element 3 until it is rewritten, and Element 4B as is now in public domain would be used a Element 4 until it is rewritten.

I would hope the above paragraph would be received with significant gravity, as our established routine takes two full years from inception of QPC activity to implementation of the new question pool in the examination room. There is a call for input for the contents of the syllabus, dissemination of the syllabus that will control the subjects to be covered in the new pool and a call for questions in step with the newly revised syllabus with which to form the pool itself. The new pool has been being placed in public domain on a December 1 with the publishers being asked to have new study guides available by the following May 1, giving the applicants two months study time before the new pool is actually implemented in the exam room July 1.

I would certainly hope this timing would be permitted to continue.

Respectfully submitted

A handwritten signature in black ink, appearing to read "Raymond K. Adams". The signature is fluid and cursive, with the first name "Raymond" being more prominent than the last name "Adams".

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